



# Air Trace *MK2*

## Operating Instructions

ID: 16462-6



# Please read these instructions fully before operating your Smoke Machine!

Thank you for choosing Concept's Air Trace *MK2*. You now own a sturdy and portable state-of-the-art smoke machine, ideal for tracing air movements. Prior to use, we suggest that you carefully read all the instructions. By following the suggestions found in this user manual, you can look forward to exceptional performance from your unit for years to come.

## Machine Specification:

<b>Smoke Output</b>	
High Output	2.8m <sup>3</sup> /minute
Low Output	1.4m <sup>3</sup> /minute
<b>Power Consumption</b>	65 – 75W
<b>Tank Capacity</b>	110ml
<b>Fluid Consumption</b>	
High Output	2ml per minute
Low Output	1ml per minute
<b>Battery</b>	12v / 2.3Ah
<b>Dimensions</b>	227 x 66 x 81mm
<b>Smoke Run Time (battery life) *continuous*</b>	
High Output	10 – 12 minutes
Low Output	15 – 20 minutes
Mains Adaption Kit	60 minutes

## **Unpacking & Inspection**

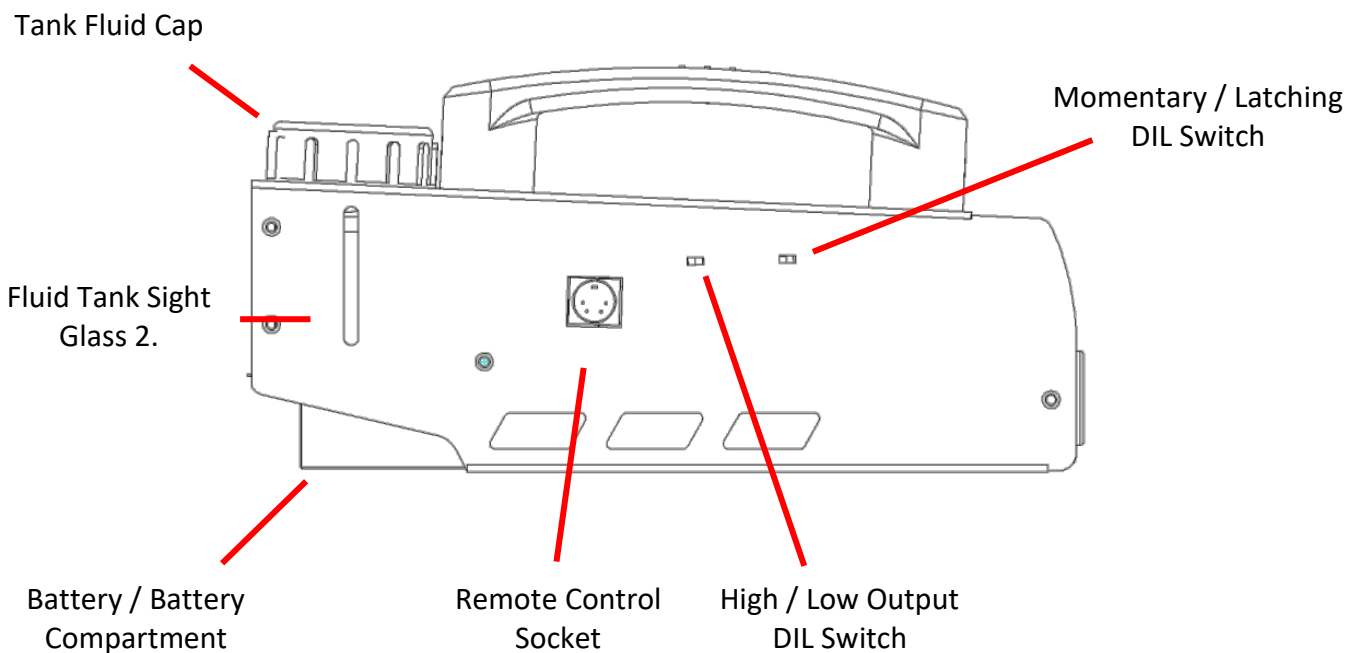
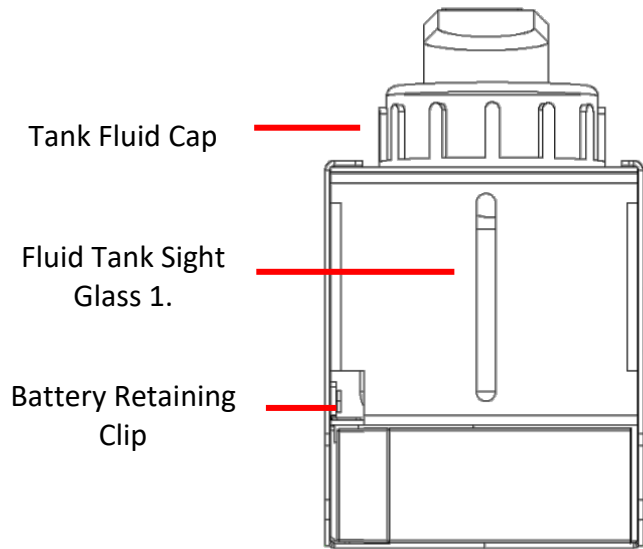
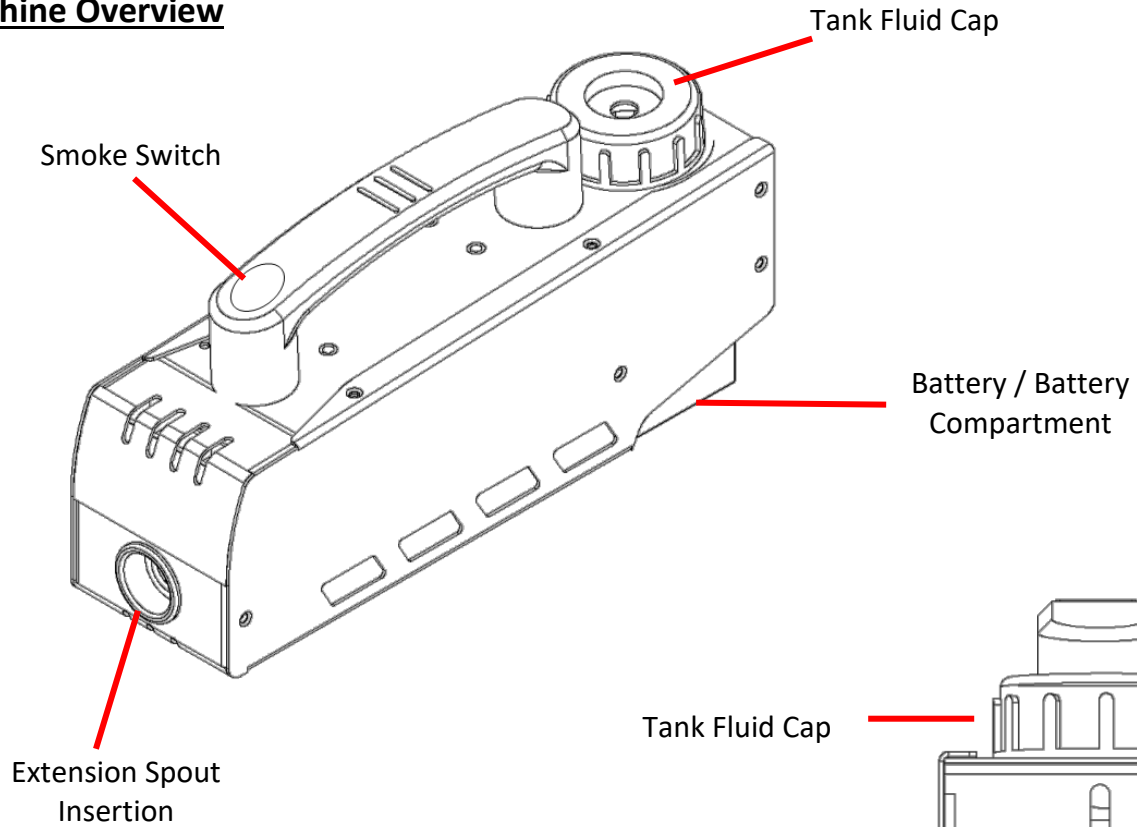
Open the shipping carton and check that all equipment necessary to operate the system has arrived intact. If transit damage is evident, contact your Concept dealer immediately. In addition to this user manual, you should receive the following items:

- Air Trace *MK2* smoke system
- Rechargeable Battery
- Battery charger and cable
- 500ml Smoke Fluid
- Extension Spout
- Professional Carry Case (with keys)

## **Important Notes & Warnings**

- Remove the battery / unplug power adaptor before filling the liquid tank.
- Keep the unit upright. Keep this device dry.
- Remove the battery or unplug the power adaptor when not in use.
- This machine is not water proof or splash proof. If moisture, water, or fog liquid gets inside the housing, immediately remove power and contact Concept before using again.
- No user serviceable parts inside. Refer to your Concept dealer or other qualified service personnel.
- Never leave the unit running unattended.
- Keep nozzle at least 50cm away from contact with anything while in operation.
- The fog vapour at point of release is under pressure and is hot.
- Never aim the output nozzle directly at people.
- Use in a well-ventilated area. Never cover the vents on the front of the smoke machine. Never aim the output nozzle at open flames.
- The output nozzle becomes hot during operation. Keep flammable materials at least 50cm away from the nozzle.
- Always allow the smoke machine to cool down before attempting to clean or service it.
- Do not expose the battery to excessive heat, keep away from open flames.
- Only use the supplied Air Trace Smoke Fluid.
- Always make sure there is sufficient liquid in the liquid tank to avoid unnecessary damage.
- If your Air Trace *MK2* fails to work properly, discontinue use immediately. Drain all Smoke Fluid from the tank, pack the unit securely and return it to your Concept dealer for service.
- Always drain Smoke Fluid from tank before shipping or transporting this unit.
- Never drink Smoke Fluid. If it is ingested, call a doctor immediately. If Smoke Fluid comes in contact with skin or eyes, rinse thoroughly with water.

## Machine Overview



## Setup

- Remove all packing. Check that foam and plastic padding is removed, especially in the nozzle area.
- Fill the unit with Concept Air Trace Smoke Fluid. When filled replace cap.
- Charge the battery. Plug the adaptor into a grounded electrical outlet. The green light on the battery charger will light up when it is connected to the power supply. Then connect the charging head to the battery. Orange / Yellow LED indicates charging. Green LED indicates trickle charging. Please note the battery requires approx. 8hr charging time on first charge. The battery will be fully charged in approximately 2-3hrs thereafter.
- Align the charged battery with the Air Trace MK2 (with the electrical contact of the battery on the right hand side of the centreline).
- Lift the silver battery retaining clip on the rear face of the smoke machine.
- Slide the battery in until you feel it is engaged.

## Operation

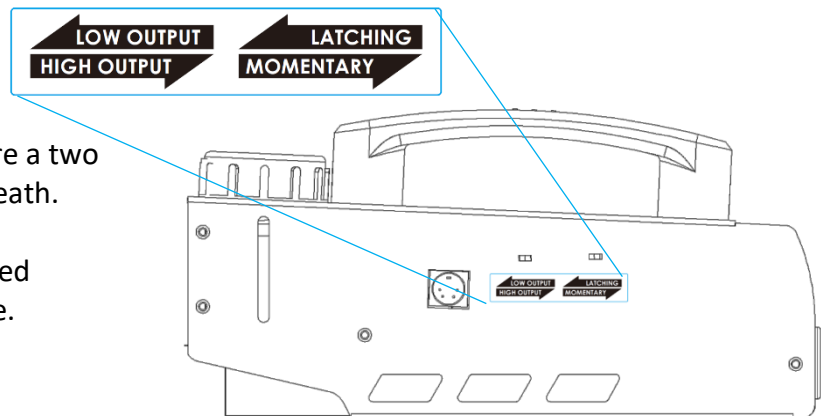
The Air Trace MK2 has two has a combination of operation modes. Users can choose between:

- High / Low output
- Latching / Momentary

On the right hand side of the machine there a two DIL switches and an appropriate label beneath.

Carefully adjust the DIL switch to the desired setting(s) using a small screwdriver / probe.

**Note:** There is virtually no warm-up time.



- Start smoke by pressing the button on the handle. The Green LED will light. After 1 or 2 seconds smoke will be produced.
- The Air Trace MK2 will fog continuously until the button is pressed a second time (latching mode) or until the button is released (momentary mode). The Green LED will go out.
- When the LED goes Red the battery needs to be charged. The machine will still be able to make smoke for a short period of time after the red light begins flashing.
- VERY IMPORTANT – to give you optimum battery life, remove the battery from the machine when you have finished.
- Carefully monitor the level of the smoke liquid to make sure the machine does not run out of liquid. A full fluid reservoir is equivalent to approximately 50 minutes of smoke.
- The machine can be operated at an angle providing smoke fluid is drawn into the machine. Providing the reservoir is full, it can be used to generate smoke +/- 45° from the horizontal plane. Ensure that the filler cap is tightened though!

**Note:** to remove the battery lift the silver Battery Retaining Clip on the rear face of the smoke machine and then pull the battery out.

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## Performance Notes

- All smoke machines develop condensation around the output nozzle.
- The Air Trace *MK2* may produce small puffs of smoke occasionally during operation and for a minute or so after being turned off. This is normal and is not indicative of a defect.
- After continuous operation, the case of the smoke machine will become warm, especially at the front of the machine. Take care in handling the machine during and shortly after fogging. Only carry the smoke machine by the handle and allow it to cool down before packing it in a carry case.
- If you experience low output, pump noise or no output at all, remove the battery immediately. Check fluid level and re-charge the battery. When the liquid tank is full and the battery is charged, plug the battery in and press the button on the handle.
- If the machine is still not working and you are unable to determine the cause of the problem, do not open the case. There are no user serviceable parts inside. Return the machine to a Concept dealer for service.

## The Battery Pack

The supplied battery is a maintenance free 12V lead-gel accumulator. It can be used in any attitude. When used correctly, the battery maintains its capacity for several hundred charge / discharge cycles. The battery has a capacity of 12Ah and is normally supplied in a charged state, although we still recommend a full charge on receipt of goods.

Lead-gel batteries are a very robust bank of capacitors which need little care and maintenance. **However, their working life can be shortened rapidly by storing them when discharged. Always ensure they are fully charged prior to storing, and ensure they are removed from the Air Trace machine prior to storage. Even in storage, we recommend that the battery is charged every 2/3 months.**

## LED Status Indicator

The LED located next to the handle signals the status of the smoke machine:

Status	LED indication
Producing fog	Solid <b>Green</b> LED
Low Battery	<b>Red</b> LED flashes
Heat Element failure	<b>Red</b> and <b>Yellow</b> LEDs flash



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## Declaration of Conformity

This document certifies that the equipment detailed below and manufactured by Concept Engineering Ltd has been manufactured, assembled and inspected in accordance with the relevant drawings, parts list and reference materials, and has been fully tested in accordance with the product specifications.

Air Trace MK2

Concept further declare that the equipment detailed above where appropriate complies with the following relevant Technical Directives and regulations and is appropriately CE marked



Applicable Equipment

Reference	Directive
2006/95/EC (73/23/EEC)	Low Voltage
87/404/EEC	Simple Pressure Vessels
2004/108/EC (89/336/EEC)	Electromagnetic Compatibility
98/37/EC	Machinery
93/68/EEC	CE Marking

Name	Title	Signature	Date
Trevor Dunnington	Technical Director		20 <sup>th</sup> January 2012



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## Accessories / Consumables

### Extension Spout

- If fitting the extension tube for precise smoke placement, ensure that the breather holes in the tube are at the end closest to the machine. They are designed to draw air into the vapour stream and help the formation of smoke.
- A small amount of deposition will occur over time in the extension tube due to the restriction of the smoke particles. Clean the extension tube periodically.



### Mains Adaption Kit (optional)

- The Air Trace MK2 can be powered via an optional power adaptor which plugs into a standard electrical outlet. The adaptor connects to a dummy battery which plugs into the battery slot on the smoke machine. This allows for extended operation.



### Radio Remote Control (optional)

- If using the option radio remote control adjust the DIL switch into the latching position. Connect the plug in Radio Remote Receiver to the remote control socket.
- To make smoke press the A button on the transmitter.
- To stop smoke press the B button on the transmitter.
- Remove after use.



### Wired Remote Control (optional)

- An optional plug in wired remote control / timer control can be plugged into the remote control socket. The wired lead is approx. 8mtr.
- The duration of the smoke blast is set at 10 seconds. The interval is controlled by the dial on the remote and is adjustable between 3 and 220 seconds.
- Smoke can also be activated via a spring loaded momentary switch.



Spares parts such as batteries, smoke fluid, chargers, and components are available from Concept.

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